



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,251	06/22/2005	Takuya Yamazaki	2005_0930A	1159
513 7590 11/13/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			EXAMINER MASINICK, MICHAEL D	
			ART UNIT 2125	PAPER NUMBER
			MAIL DATE 11/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/540,251

**Applicant(s)**

YAMAZAKI ET AL.

**Examiner**

Michael D. Masinick

**Art Unit**

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,15,17 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 3-14,16 and 18-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/22/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 1-30 are pending in this application. This is the first office action on the merits.

#### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claim language does not conform to current U.S. Standards. Specifically, claiming a “program” is not statutory subject matter unless the program is clearly embodied on a computer readable medium. Likewise, claim 30 is rejected as applicant did not invent the medium itself, therefor cannot claim the program as such. Claim 29 should be modified to recite that it is a computer program executable by a processor and embodied on a computer readable medium.

Claims 29 and 30 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either an asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2125

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2,15,17,27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02-13590 (included in applicant's IDS of 6/22/2005).

4. WO 02-13590 was cited as an X reference and used to show that the current invention is not an inventive step in the International Preliminary Report of Patentability.

5. Referring to claims 1 and 27-30, WO 02-13590 shows an optimizing method that optimizes, using a computer, a component mounting order in which a mounter equipped with a mounting head picks up, at maximum, L components, L being no less than 2, from an array of component feeders that hold components, and mounts the components on a board, wherein the mounting head has, at maximum, L pickup nozzles for picking up the components, L being no less than 2, and a plurality of components to be optimized include plural types of components which are picked up using no less than 2 pickup nozzles of different types, and the optimizing method comprising: a nozzle set determination step of determining a nozzle set for mounting all the plurality of components with a smallest task number, where a nozzle set is a combination of pickup nozzles to be attached to the mounting head and a task is a group of components to be mounted by one iteration of the repeated series of processes where the mounting head picks up, transports, and mounts components (Figure 151 and discussion thereof); and a mounting order determination step of determining the array order of component feeders and the component mounting order, while maintaining the determined nozzle set (S764 in figure 151). Examiner notes that the term "nozzle set" is not used, but the nozzles are determined (thus a set is created) and then the mounting order is determined. There is no indication that this is not based on maintaining the determined nozzle set.

Art Unit: 2125

6. Referring to claim 2, WO 02-13590 shows wherein the pickup nozzles attached to the mounting head are interchangeable, and in the nozzle set determination step, a nozzle set is determined, said nozzle set reducing a mounting time in view of the number of times interchanging the pickup nozzles for mounting the components and a total number of tasks (S762). The claim element “nozzle set reducing a mounting time” appears to be a result of the previous claim elements and not a new claim element in itself.

7. Referring to claim 15, WO 02-13590 shows wherein the mounter includes a nozzle station at which the pickup nozzles are arranged, and the optimizing method further comprises a nozzle station arrangement determination step of determining a combination of a type of nozzles to be arranged at the nozzle station and a place for the arrangement based on the nozzle set determined in the nozzle set determination step (Figures 140-150 and the discussion thereof are all dedicated to nozzle arrangement to minimize changeover time when a changeover is necessary).

8. Referring to claim 17, WO 02-13590 shows wherein in the nozzle set determination step, the nozzle set and the task number are determined, said nozzle set for mounting all the plurality of components with the smallest task number, without interchanging the pickup nozzles attached to the mounting head (Figure 151 – minimize interchanges).

***Allowable Subject Matter***


9. Claim 3-14,16,18-26 are indicated as having allowable subject matter and are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Michael D Masinick  
Primary Examiner  
Art Unit 2125

  
Michael D. Masinick  
Primary Examiner  
Art Unit 2125

MDM, Nov 1, 2007